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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,313	08/27/2003	Makoto Mogamiya	P23749	3666

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GREENBLUM & BERNSTEIN, P.L.C.
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RESTON, VA 20191

EXAMINER

KHAN, USMAN A

ART UNIT	PAPER NUMBER
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2622

NOTIFICATION DATE	DELIVERY MODE
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08/21/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/648,313

Applicant(s)

MOGAMIYA ET AL.

Examiner

Usman Khan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed on 04/13/2007 with respect to claims 1 - 8 have been considered but are moot in view of the new ground(s) of rejection.

Regarding objection to specification provided in the previous office action for not providing a descriptive title. Applicant has amended the title of the invention to overcome the objection to the specification.

Applicant's arguments filed on 04/13/2007 with respect to claims 9 - 14 have been considered but are not persuasive.

Please refer to the following office action, which clearly sets forth the reasons for non-persuasiveness.

In response to applicant's argument that in claim 9:

Regarding **claims 9**, Applicant argues that Yoshida fails to teach frame member being provided with at least one of a low-pass filter and an infrared absorption filter secured thereto. Also, applicant argues that Yazawa reference merely discloses an optical filter, and completely fails to disclose a shutter, let alone a shutter in relation to a frame member.

However the examiner notes that Yazawa teaches in paragraph 0058 and figures 4 and 6 item 28, that various filters 28 such as a crystal filter, an IR cut filter, and the like

are disposed on the extreme end side, which is the incident light side of the CCD 11, of the imaging element frame 21. Also, Yoshida teaches a shutter in relation to a frame member in figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*; more specifically in figure 2 the frame member structure 10 is in relation to a shutter 11.

DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino et al. (US patent No. 3,975,750) in further view of Suzuki et al. (US patent No. 4,589,023).

Regarding **claim 1**, Yoshino et al. teaches an camera (figures 1 - 2, 5, 9, 11 - 12, 14 - 15) comprising: an image pickup element (figure 1 item 6, figure 5 item 63) provided in an optically isolated space (figure 1 item 6 enclosed in bellows structure, figure 5 item 63 enclosed in dark box 62) which is opened and closed by a shutter (column 7 line 60 – column 8 line 12 item 64); an image pickup optical system which makes object light incident upon the image pickup element (figure 1 items 3, 4, 8, and 9, figure 5 items 52 – 56); and a sealing member configured to seal an image pickup light path extending from the shutter to the image pickup element (figure 1 item 5; figure 11 item 103, figure 12 item 133).

However, Yoshino et al. fails to teach that the camera is an electronic still camera. Suzuki et al., on the other hand teaches that the camera is an electronic still camera.

More specifically, Suzuki et al. teaches that the camera is an electronic still camera (abstract, column 1 lines 5 *et seq.*, and column 2 lines 40 *et seq.*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Suzuki et al. with the teachings of Yoshino et al. because in column 1 lines 11 - 20 Suzuki et al. teaches that "electronic cameras have been proposed as a substitute for the film conventional cameras because of the advantages that it is not necessary to use film requiring chemical treatment and the images can quickly be reproduced on a television receiver" thereby reducing cost and saving time.

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that the said sealing member comprises a tubular member which surrounds a light path space defined between the shutter and the image pickup element (figure 1 item 5, figure 5 item 62, figure 9 item 103, figure 11 item 103, figure 12 item 133, and figure 14 item 133) (Note: nowhere in the claim does the applicant require the tubular member to be cylindrical).

Regarding **claim 3**, as mentioned above in the discussion of claim 2, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that said tubular member is configured to be extendable and contractible in an optical axis direction of the image pickup optical system (figures 9 and 10; also figures 14 and 15); and wherein an optical element is fitted in an opening of said tubular member on the object side to seal the tubular member (figure 5 item 561 also figure 11 lens in front of item 92).

Regarding **claim 4**, as mentioned above in the discussion of claim 1, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that said sealing member comprises a tubular member which surrounds a light path space defined between the shutter and an image pickup surface of the image pickup element (figure 1 item 5, figure 5 item 62, figure 9 item 103, figure 11 item 103, figure 12 item 133, and figure 14 item 133), wherein said tubular member is extendable and contractible in an optical axis direction of the image pickup optical system (figures 9 and 10; also figures 14 and 15), said tubular member being closely connected, at the end thereof which defines an opening end on the object side, to a frame member, which restricts an aperture which is opened and closed by the shutter, and an optical element which seals the frame member (figure 5 item 62 and column 7 line 60 – column 8 line 12 item 64 and figure 5 item 561 also figure 11 lens in front of item 92).

Regarding **claim 5**, as mentioned above in the discussion of claim 3, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that said tubular member is in close contact, at an end surface thereof defining the opening on the object side, with the frame member which restricts the aperture opened and closed by the shutter (figure 5 item 62 and column 7 line 60 – column 8 line 12 item 64).

Regarding **claim 6**, as mentioned above in the discussion of claim 3, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that said optical element is secured to the frame member (figures 1 – 2 items 2 and 3, figure 5 item 51 and 52, figure 11 items 104 and 102, figure 12 items 134 and 132 and figure 5 item 561 also figure 11 lens in front of item 92).

Regarding **claim 7**, as mentioned above in the discussion of claim 3, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. Additionally, Yoshino et al. teaches that said optical member is a transparent plane-parallel plate (figure 5 item 561 also figure 11 lens in front of item 92).

Claim 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino et al. (US patent No. 3,975,750) in further view of Suzuki et al. (US patent No. 4,589,023) in further view of Examiners Official Notice.

Regarding **claim 8**, as mentioned above in the discussion of claim 3, Yoshino et al. in further view of Suzuki et al. teach all of the limitations of the parent claim.

However, Yoshino et al. in further view of Suzuki et al. fail to disclose that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter.

The examiner takes Official Notice that it is old and well known in the art to use at least one of a low-pass filter and an infrared absorption filter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an infrared absorption filter to exalt the transmittance to visible light and cut the near infrared light efficiently. Also, the pigment is dispersed uniformly in high concentration without aggregation.

Also, in an alternate form it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a low-pass filter to remove noises such as flickering lights and machine vibrations occurring at high-frequency while simultaneously adapting to slow down the changes in the source images. Also, a low-pass filter can be used to effectively eliminate color moire fringes, and improves the quality of an image.

Regarding **claim 15**, as mentioned above in the discussion of claim 1, Yoshino et al. in further view of Suzuki et al. teaches all of the limitations of the parent claim. However, Yoshino et al. in further view of Suzuki et al. fail to disclose an optical filter fitted in an opening at an object side of said sealing member.

The examiner takes Official Notice that it is old and well known in the art to have an optical filter fitted in an opening at an object side of said sealing member.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an optical filter fitted in an opening at an object side of said sealing member to filter for example infrared, high pass, low pass signals, UV filters, color filters, or polarizing filters to improve image quality by removing unwanted artifacts in images.

Claims 9, 12, and 16 - 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333).

Regarding **claim 9**, Yoshida discloses an electronic still camera comprising: an image pickup element (figure 5 item 41, and column 4 lines 45 *et seq.*) provided in an optically isolated space (figure 5 and column 4 lines 45 *et seq.*) which is opened and closed by a shutter (figures 2 and 5 item 40); an image pickup optical system configured to make object light incident upon the image pickup element (figures 2 item 41 not labeled in figure and 5 item 41); and a frame member configured to restrict an aperture which is opened and closed by the shutter (figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*).

However, Yoshida fails to disclose that the said frame member being provided with at least one of a low-pass filter and an infrared absorption filter secured thereto.

Yazawa et al., on the other hand discloses that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter.

More specifically, Yazawa et al. discloses that the said frame member is being provided with at least one of a low-pass filter and an infrared absorption filter secured thereto (paragraph 0058 and figures 4 and 6 item 28).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of an infrared filter can increase the use of the camera because invisible light to the human eye can be seen such as photography in the dark.

Regarding **claim 12**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. discloses the said infrared absorption filter is secured to the frame member, the frame member located closer to the image pickup element than the shutter (paragraph 0058 and figures 4 and 6 item 28).

Regarding **claim 16**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yoshida teaches that said frame member is provided at an object side of the optically isolated, space (Yoshida teaches a shutter in relation to a frame member in figures 2 and 5 items

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11, 40, and 41; and column 4 lines 45 *et seq.*; more specifically in figure 2 the frame member structure 10 is in relation to a shutter 11).

Regarding **claim 17**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yoshida teaches that said frame member supports the shutter (Yoshida teaches a shutter in relation to a frame member in figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*; more specifically in figure 2 the frame member structure 10 is in relation to a shutter 11).

Claims 10 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333) in further view of Examiner's Official Notice.

Regarding **claim 10**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. teaches that the said low-pass filter and the infrared absorption filter are cemented to each other.

More specifically, Yazawa et al. discloses that the said low-pass filter and the infrared absorption filter are cemented to each other (paragraph 0058 and figures 4 and 6 item 28, also even though the invention of Yazawa et al. uses a IR filter mounted to a crystal filter the examiner takes official notice that it is old and well known in the art that

the use of a optical low-pass filter in lieu of a crystal filter will eliminate any residual pixel structure in the projected image in turn producing improved image quality).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of the filters mounted in this arrangement will result in overall efficiency of the isolated space by reducing individual part movement.

Regarding **claim 11**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. teaches that the said low-pass filter is closely secured to the frame member which is located closer to the image pickup element than the shutter (paragraph 0058 and figures 4 and 6 item 28, also even though the invention of Yazawa et al. uses a IR filter mounted to a crystal filter the examiner takes official notice that it is old and well known in the art that the use of a optical low-pass filter in lieu of a crystal filter will eliminate any residual pixel structure in the projected image in turn producing improved image quality).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of the filters mounted in this arrangement will result in overall efficiency of the isolated space by reducing individual part movement.

Claim 13 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333) in further view of Maeda et al. (US patent No. 5,050,014).

Regarding **claim 13 - 14**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. However, Yoshida and Yazawa et al. fail to teach that the said infrared absorption filter is secured to the frame member, is the frame member located closer to an object than the shutter. Maeda et al., on the other hand discloses that the infrared absorption filter is secured to the frame member, is the frame member located closer to an object than the shutter.

More specifically, in figure 1 Maeda et al. teaches that the said infrared absorption filter (35) is secured to the frame member, is the frame member located closer to an object than the shutter (36) (i.e. the infrared filter is located just outside of the shutter in the optical system).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Maeda et al. with the teachings of Yoshida and Yazawa et al. to minimize the bellows structure formed by the combination of Yoshida and Yazawa et al. in turn due to the size reduction power consumption will be reduced in the operation of the bellows.

Conclusion

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan
08/13/2007
Patent Examiner
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DAVID OMETZ
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